

Notice of Allowability

Application No.

10/758,758

Applicant(s)

AUTRYVE ET AL.

Examiner

Hsien-ming Lee

Art Unit

2823

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 3/8/2007.
2. ☒ The allowed claim(s) is/are 1-18,32,33,35,36,38-41 and 44-46.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

HSIEN-MING LEE
PRIMARY EXAMINER

Hsien-ming Lee
Primary Examiner
Art Unit: 2823

4/9/07

DETAILED ACTION

Remarks

1. The Final rejection mailed 1/4/2007 has been withdrawn in response to applicant's amendment filed 3/8/2007.
2. Claims 1-18, 32-33, 35-36, 38-41, 44-46 are pending in the application.

Allowable Subject Matter

3. Claims 1-18, 32-33, 35-36, 38-41, and 44-46 are allowed.
4. The following is an examiner's statement of reasons for allowance:

In re claim 1, the primary reason for allowance of the claim is the patentably distinct method comprising exposing the substrate to electromagnetic radiation having a *wavelength between about 600 nm and about 1000 nm*, wherein the substrate having a layer comprising *amorphous carbon* formed thereon.

In re claim 9, the primary reason for allowance of the claim is the patentably distinct method comprising exposing the substrate to electromagnetic radiation having a *wavelength between about 600 nm and about 1000 nm*, wherein the substrate having a layer comprising *amorphous carbon* and *a dopant* formed thereon.

In re claim 32, the primary reason for allowance of the claim is the patentably distinct structure that can only be defined by the processing steps, wherein the processing steps would be expected to impart distinctive structural characteristics to the final product, and wherein the processing steps comprising exposing the substrate to electromagnetic radiation having a *wavelength between about 600 nm and about 1000 nm*, wherein the substrate having a layer comprising *amorphous carbon* and *a dopant* formed thereon.

In re claim 40, the primary reason for allowance of the claim is the patentably distinct method comprising *removing* the layer from the substrate *after* the exposing the substrate to the electromagnetic radiation, wherein the layer comprising *amorphous carbon* is deposited on the substrate.

In re claim 41, the primary reason for allowance of the claim is the patentably distinct method comprising implanting dopant ions into a substrate *before* depositing a layer comprising amorphous carbon on the substrate.

In re claim 44, the primary reason for allowance of the claim is the patentably distinct method comprising exposing the substrate to electromagnetic radiation heats a top surface layer of the substrate to a temperature *between about 1100 °C and about 1410 °C* and wherein the substrate having a layer comprising *amorphous carbon* formed thereon.

In re claim 45, the primary reason for allowance of the claim is the patentably distinct method comprising depositing a layer comprising *amorphous carbon and a dopant* selected from the group consisting of nitrogen, boron, phosphorus, fluorine and combination thereof on the substrate.

In re claim 46, the primary reason for allowance of the claim is the patentably distinct method comprising *removing* the layer from the substrate *after* the exposing the substrate to the electromagnetic radiation, wherein the layer comprising *amorphous carbon* is deposited on the substrate.

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

In re claim 33, the primary reason for allowance of the claim is the patentably distinct structure that can only be defined by the processing steps, wherein the processing steps would be expected to impart distinctive structural characteristics to the final product, and wherein the processing steps comprising exposing the substrate to electromagnetic radiation having a *wavelength between about 600 nm and about 1000 nm*, wherein the substrate having a layer comprising *amorphous carbon* and *nitrogen* formed thereon.

In re claim 35, the primary reason for allowance of the claim is the patentably distinct structure that can only be defined by the processing steps, wherein the processing steps would be expected to impart distinctive structural characteristics to the final product, and wherein the processing steps comprising exposing the substrate to electromagnetic radiation having a *wavelength between about 600 nm and about 1000 nm*, wherein the substrate having a layer comprising *amorphous carbon* formed thereon and implanting dopant into the substrate *before* depositing the layer comprising amorphous carbon.

In re claim 38, the primary reason for allowance of the claim is the patentably distinct method comprising exposing the substrate to electromagnetic radiation heats a top surface layer of the substrate to a temperature *between about 1100 °C and about 1410 °C* and wherein the substrate having a layer comprising *amorphous carbon* formed thereon.

In re claim 39, the primary reason for allowance of the claim is the patentably distinct method comprising depositing a layer comprising *amorphous carbon and a dopant* selected from the group consisting of nitrogen, boron, phosphorous, fluorine and combination thereof on the substrate.

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hsien-ming Lee whose telephone number is 571-272-1863. The examiner can normally be reached on Tuesday-Thursday (7:30 ~ 6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Smith can be reached on 571-272-1907. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hsien-ming Lee
Primary Examiner
Art Unit 2823

April 9, 2007

HSIEN-MING LEE
PRIMARY EXAMINER

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